PHYS 126 GENERAL PHYSICS II (WITH LAB)

SPRING 2021

**** Due to the large enrollment, this course will be entirely online for all students for Spring 2021 ****

This semester you will learn about concepts and laws that mathematically describe the universe and serve as the basis for many branches of human endeavor. At the end of this semester you will have a basic but firm knowledge of waves, optics, electricity, magnetism, and circuits. More importantly, you will develop *an attitude of thought and a way of thinking* that will serve you in future studies.

Instructors

Stan Dodds	dodds@rice.edu	713-348-2510	215 HRZ
Jason Hafner	hafner@rice.edu	713-348-3205	262 BRK
Jared Stenson	stenson@rice.edu	713-348-5727	241 BRK

Topics

The course will cover Waves, Geometrical Optics, Electrostatics, Magnetism, and Circuits. See the Canvas course page for a detailed schedule of topics and corresponding readings.

Textbook

Knight, Randall D., "Physics for Scientists and Engineers: A Strategic Approach with Modern Physics," 4th edition, Pearson Publishing (ISBN: 9780133942651).

Meeting Times

Lecture

Live-streamed lectures will be presented on Tuesdays and Thursdays from 9:40 – 11:00 am (links available in Canvas). These will include explanations of the physical concepts and formulas, demonstrations, and solutions to sample problems. The lectures will be recorded and available online to view at any time, but we encourage active participation in class if possible. The lectures will be delivered in a way that you can ask questions and be actively engaged.

Office Hours

The instructors will hold online office hours throughout the week. These are good times to get clarifications on physical concepts and to get help on moving forward with homework problems. They are NOT a time to simply watch the instructor solve homework problems. The schedule will be set once we know the locations and time zones of students registered for the course.

Dr. Stenson: TBD
Dr. Hafner: TBD

Canvas Homework
Weekly graded homework assignments will be available through Canvas. These problem sets are due on Wednesdays and cover the previous week's material. Canvas Homework is not pledged, so you may talk to the instructors and other students about how to solve them, *but you are advised to work on your homework individually for as long as you are making progress.* Discussing, articulating, and learning from your peers can be helpful but it must remain constructive (reasoning-centered and independent rather than answer-centered and conforming). If you need help from others you may collaborate but do not confuse this with the important task of making progress on your own. Working wisely on these problems is an essential part of your training and it will improve your performance on exams. Letting a classmate solve a homework problem for you is like an athlete letting a teammate workout for them.

Suggested Problems
These are problems from the textbook that are relevant to the material we will cover. They are not required and have no impact on your grade. They are simply offered for more problem-solving practice.

Pledge Problems
Students will be assigned pledge problems in Canvas. These are extensive problems that students must complete *on their own* (they are "pledged"). They occur approximately every other week, and are intended to let students check and deepen their understanding of the material and prepare them for the exams.

Laboratory
The laboratory portion of the course is online. There are six labs that will be run during specific weeks of the semester, but not at a specific time. You will have access to a TA for assistance and you will turn in scanned lab reports for grading.

Exams
There will be two midterm exams and a final exam, all offered through Canvas. The midterm exams will be held on **Friday, Februrary 26th**, and **Friday, April 2nd**. You will have two hours to complete the exam within a three-hour window **between 7:00 pm and 10:00 pm CDT** on the dates listed above. For students in other time zones, an alternate three-hour window will be set. These exam times are not optional or flexible, apart from individual allowances for documented illnesses, personal emergencies, and extra time through DSS policies.

Late Policy
Canvas Homework is set to automatically deduct 25% per day the assignment is late. Pledge Problems, Labs, and Exams cannot be accepted late except for individual cases of documented illness or personal emergency.

Honor Code
We expect you to uphold the ideals set out by the honor council for Rice University students. More information can be found at http://honor.rice.edu/Links to an external site.. Students caught cheating will be reported to the Honor Council and the instructors will suggest the maximum allowable penalty. Know that Canvas records the content and timing of every keystroke you enter.

Grades
Your total scores in each category will be combined with the following ratios to calculate your final grade:

Canvas Homework 10%
Pledge Problems 10%
Laboratory 14%
Midterm Exam 1 22%
Midterm Exam 2 22%
Final Exam 22%

The following are tentative minimum final scores for letter grades. These may be lowered, but will not be raised.

A- 87%
B- 77%
C- 67%
D- 57%

Technology Requirements
Students attending remotely must have a working computer with a video camera, speaker and a microphone, and a working internet connection that allows them to be on video. Students should test their equipment before joining class. Undergraduate students should contact the Dean of Undergraduates if they have concerns about meeting this requirement.

Students with Disabilities
Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with Dr. Hafner during the first two weeks of class. All such discussions will remain completely confidential. Any documentation must come directly from the Disability Support Services in Allen Center.

Title IX Responsible Employee Notification

Rice University cares about your wellbeing and safety. Rice encourages any student who has experienced an incident of harassment, pregnancy discrimination or gender discrimination or relationship, sexual, or other forms interpersonal violence to seek support through The SAFE

Office. Students should be aware when seeking support on campus that most employees, including myself, as well as the instructor/TA, are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. For more information, please visit

safe.rice.edu or email titleixsupport@rice.edu.

Disclaimer

The syllabus is subject to change at the discretion of the instructors. Students will be notified ahead of time before any changes take effect.